



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2011-0454; Directorate Identifier 2009-SW-54-AD;**

**Amendment 39-16973; AD 2012-05-01]**

**RIN 2120-AA64**

**Airworthiness Directives; Eurocopter France Model Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for the Eurocopter France (ECF) Model SA-365C, SA-365C1, SA-365C2, SA-365N, SA-365N1, AS-365N2, AS 365 N3, and SA-366G1 helicopters. This AD was prompted by some reports of deterioration and two reports of failure of Starflex star arm ends. The actions are intended to modify the main rotor frequency adapters to reduce the temperature in the area, to prevent failure of the star arm end, severe vibration, and subsequent loss of control of the helicopter.

**DATES:** This AD is effective on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**].

The Director of the **Federal Register** approved the incorporation by reference of certain documents listed in this AD as of [insert date 35 days after date of publication in the **Federal Register**].

**ADDRESSES:** For service information identified in this AD, contact American Eurocopter Corporation, 2701 Forum Drive, Grand Prairie, Texas 75053-4005, telephone (800) 232-0323, fax (972) 641-3710 or at <http://www.eurocopter.com>. You may review a copy of the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth Texas 76137.

**EXAMINING THE AD DOCKET:** You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, any incorporated-by-reference service information, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (telephone: 800-647-5527) is U.S. Department of Transportation, Docket Operations Office, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Gary Roach, ASW-111, Aviation Safety Engineer, Rotorcraft Directorate, Regulations and Guidance Group, 2601 Meacham Blvd, Fort Worth, Texas 76137, telephone (817) 222-5130, fax (817) 222-5961, email [gary.b.roach@faa.gov](mailto:gary.b.roach@faa.gov).

**SUPPLEMENTARY INFORMATION:**

**Discussion**

On May 13, 2011, at 76 FR 27954, the Federal Register published our notice of proposed rulemaking (NPRM), which proposed to amend 14 CFR part 39 to include an AD that would apply to ECF Model SA-365C, SA-365C1, SA-365C2, SA-365N, SA-365N1, AS-365N2, AS 365 N3, and SA-366G1 helicopters, certificated in any

category. The proposed requirements were intended to modify the main rotor frequency adapters to reduce the temperature in the area, to prevent failure of the star arm end, severe vibration, and subsequent loss of control of the helicopter.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Emergency AD (EAD) No. 2006-0362-E, dated November 30, 2006, to correct an unsafe condition for the specified Eurocopter model helicopters. EASA advises that this EAD is issued following some reports of deterioration and two reports of failure of Starflex star arm ends. EASA states that these deteriorations “generated high-amplitude vibrations in flight, compelling the pilot to carry out a precautionary landing, in each of these cases. The failure of the Starflex star arm end could make it impossible to control the helicopter. These deteriorations are due to the strong effect of temperature on the strength of the bush-to-Starflex star arm end attachment.” As a result, EASA issued its EAD to require modification (MOD 0762C39) of the frequency adapters and the frequency adapter bushes to improve the ventilation in the area on the star arm end on “helicopters operated in hot climatic conditions and/or tropical and damp atmosphere.”

### **Comments**

We gave the public an opportunity to participate in developing this AD, but we did not receive any comments on the NPRM.

### **FAA’s Determination**

We have reviewed the relevant information and determined that an unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs and that air safety and the public interest require adopting the AD requirements as proposed except for minor editorial and formatting changes. These minor editorial

changes are consistent with the intent of the proposals in the NPRM and will not increase the economic burden on any operator nor increase the scope of this AD.

### **Differences Between this AD and the EASA AD**

This AD differs from the EASA AD as follows:

- We refer to flight hours as hours time-in-service.
- We refer to a check as an inspection because it is an action performed by maintenance personnel rather than a pilot.
- We omit the phrase “hot climatic conditions and/or in tropical and damp atmosphere” because it is unenforceable.

### **Related Service Information**

ECF has issued one Emergency Alert Service Bulletin, dated November 23, 2006, with four different numbers: No. 62.00.24 is for the civil Model SA-365 N, AS-365N1, AS-365N2, and AS 365 N3; No. 62.14 is for the civil Model SA-366G1; No. 65.45 is for the Model SA-365C, C1, and C2; and No. 62.00.10 is for the non-FAA type certificated military Model 565 helicopters. The actions described in the EASA AD are intended to correct the same unsafe condition as that identified in the service information.

### **Costs of Compliance**

We estimate that this AD will affect about 37 helicopters of U.S. registry. We estimate that operators may incur the following costs in order to comply with this AD:

- \$1,020 assuming 12 work-hours per helicopter to modify the frequency adapters and bushes at an average labor rate of \$85 per work-hour, and
- \$960 per helicopter for required parts.

Based on these figures, we estimate the cost of the AD on U.S. operators to be \$73,260.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on helicopters identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2012-05-01 **EUROCOPTER FRANCE:** Amendment 39-16973;

Docket No. FAA-2011-0454; Directorate Identifier 2009-SW-54-AD.

##### **(a) Applicability.**

This AD applies to Model SA-365C, SA-365C1, SA-365C2, SA-365N, SA-365N1, AS-365N2, AS 365 N3, and SA-366G1 helicopters, certificated in any category.

##### **(b) Unsafe Condition.**

This AD defines the unsafe condition as deterioration and failure of Starflex star arm ends. These deteriorations generated high-amplitude vibrations in flight requiring precautionary landings. These deteriorations are due to the strong effect of temperature on the strength of the bush-to-Starflex star arm end attachment and require modification of the frequency adapters and the frequency adapter bushes to improve the ventilation in the area on the star arm end. This condition could result in failure of the star arm end, severe vibration, and subsequent loss of control of the helicopter.

**(c) Effective Date.**

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**].

**(d) Compliance.**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

**(e) Required Actions.**

(1) For a main rotor head frequency adapter, pre MOD 0762C39, within 110 hours time-in-service (TIS), remove the main rotor blades, modify the frequency adapters and bushes, and change the part number of the frequency adapter as shown in Figures 1 through 5 and by following the Accomplishment Instructions, paragraph 2.B.2., of Eurocopter Emergency Alert Service Bulletin (EASB) No. 62.00.24 for the Model SA-365N, N1, AS-365N2, and AS 365 N3; No. 62.14 for the Model SA-366G1; and No. 65.45 for the Model SA-365C, C1, and C2 helicopters; all dated November 23, 2006. This modification is MOD 0762C39.

(2) For each main rotor head frequency adapter modified per MOD 0762C39,

within 10 hours TIS, unless accomplished previously, and thereafter at intervals not to exceed 10 hours TIS, inspect to determine whether the safety wire is in place on the trailing edge of the frequency adapter and whether the holes in the frequency adapters and the frequency adapter bushes, as shown in Figure 5 of the EASB for your model helicopter, are blocked.

(i) If the lockwire is missing from the trailing edge of the frequency adapter, before further flight, reposition the bush if it has turned and install more safety wire.

(ii) If a hole is blocked, before further flight, unblock the hole.

(3) Before installing a frequency adapter or bush, modify the frequency adapter or bush and change the part number in accordance with paragraph (e)(1) of this AD.

**(f) Alternative Methods of Compliance (AMOCs).**

(1) The Manager, Safety Management Group, DOT/FAA Southwest Region, FAA, may approve AMOCs for this AD. Send your proposal to: Gary Roach, ASW-111, Aviation Safety Engineer, Rotorcraft Directorate, Regulations and Guidance Group, 2601 Meacham Blvd, Fort Worth, Texas 76137, telephone (817) 222-5130, fax (817) 222-5961, email [gary.b.roach@faa.gov](mailto:gary.b.roach@faa.gov).

(2) For operations conducted under a Part 119 operating certificate or under Part 91, Subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

**(g) Additional Information.**

(1) The Eurocopter EASB contains four different EASB numbers; three (Nos.



62.00.24, 62.14, and 65.45) apply to different civil Eurocopter model helicopters; and one (No. 62.00.10) only applies to non-FAA type-certificated military Model 565 helicopters and is not incorporated by reference. You may review a copy of the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth Texas 76137.

(2) The subject of this AD is addressed in European Aviation Safety Agency Emergency AD No. 2006-0362-E, dated November 30, 2006.

**(h) Subject.**

Joint Aircraft System/Component (JASC) Code 5311: Main Rotor Head.

**(i) Material Incorporated by Reference.**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the following service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise.

(i) Eurocopter Emergency Alert Service Bulletin (EASB) No. 62.00.24 (for the civil Model SA-365 N, AS-365N1, AS-365N2, and AS 365 N3), Revision 0, dated November 23, 2006

(ii) Eurocopter EASB No. 62.14 (for the civil Model SA-366G1), Revision 0, dated November 23, 2006

(iii) Eurocopter EASB No. 65.45 (for the Model SA-365C, C1, and C2), Revision 0, dated November 23, 2006

Note to paragraph (i)(2): These service bulletins were issued together as one document along with Eurocopter EASB No. 62.00.10 (for the non-FAA type certificated military Model 565 helicopters), which is not incorporated by reference.

(3) For service information identified in this AD, contact American Eurocopter Corporation, 2701 Forum Drive, Grand Prairie, Texas 75053-4005, telephone (800) 232-0323, fax (972) 641-3710 or at <http://www.eurocopter.com>.

(4) You may review copies at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Fort Worth, Texas, on February 24, 2012.

Lance T. Gant,

Acting Manager, Rotorcraft Directorate,  
Aircraft Certification Service.

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